

## **REMARKS/ARGUMENTS**

Applicants thank the Examiner for acknowledging the claim for foreign priority under 35 U.S.C. § 119, noting that the priority documents have been received, initialing the Information Disclosure Statements, and accepting the drawings filed on July 28, 2004.

### **I. Status of Claims**

Claims 1-14, 63 and 77-97 are currently pending in the application. This Amendment amends claims 1 and 63, adds claims 77-97 and addresses each point of rejection raised by the Examiner. Claims 15-62 and 64-76 were withdrawn from consideration pursuant to a restriction requirement and have now been canceled without prejudice.

The amended claim language and new claims find support in the specification as originally filed. No new matter has been added. Favorable reconsideration is respectfully requested.

### **II. Double Patenting Rejection**

Claim 1 is rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 7,321,690, in view of the article entitled "Extraction of Unconstrained Caption Text from General-Purpose Video" by Crandall.

Applicants respectfully request that the Examiner hold the rejection of claim 1 in abeyance. An appropriate Terminal Disclaimer (TD) will be filed to overcome the

non-statutory double patenting rejection once the other rejections in the Office Action are withdrawn.

### **III. Rejections of Claims under 35 U.S.C. §103(a)**

Claims 1, 2 and 63 are rejected under 35 U.S.C § 103(a) as being unpatentable over Crandall, in view of Feng, U.S. Patent Application Publication No. 2004/0120598.

Applicants respectfully requests reconsideration of the rejections because the cited prior art does not disclose, teach, suggest or render obvious each and every feature of the amended claims. In particular, starting with amended independent claim 1, the claim recites:

A device for recognizing characters in an image, comprising:

an input part for receiving the image;

a blurring decision part for classifying the received image into character blocks and background blocks, calculating an average energy ratio of the character blocks, and comparing the average energy ratio with a predetermined threshold to determine whether the received image is blurred;

an object skew correction part for classifying, if the received image is not blurred, stripes having or exceeding a predetermined length in the received image, calculating direction angles of the classified stripes to measure a skew of an object, determining a skew angle corresponding to the measured skew, and rotating the image by the determined skew angle to correct the skew of the object in the image;

an image binarization part for classifying the skew-corrected image into character blocks and background blocks, comparing pixels in the character blocks with a pixel threshold, binarizing the pixels in the character blocks into a brightness value for a character pixel and a brightness value for a background pixel based on the comparison, and binarizing pixels in the background blocks into the brightness value for a background pixel; and

a character recognition part for recognizing characters  
in the binarized image.

Applicants submit that, at the least, Crandall and Feng fail to render obvious the recited claim feature of an “object skew correction part”. Specifically, Applicants respectfully submit that Crandall and Feng do not disclose, teach, suggest or render obvious “an object skew correction part for classifying, if the received image is not blurred, stripes having or exceeding a predetermined length in the received image, calculating direction angles of the classified stripes to measure a skew of an object, determining a skew angle corresponding to the measured skew, and rotating the image by the determined skew angle to correct the skew of the object in the image”. Crandall and Feng are completely silent regarding the amended claim language.

Thus, the combination of Crandall and Feng fails to teach each limitation of independent claim 1, or to even suggest each limitation. Nor would there be any apparent reason to combine Crandall and Feng. Independent claim 63 comprises similar subject matter to that of independent claim 1 and is therefore distinguished from Crandall and Feng for reasons similar to those given above.

Therefore, Applicant respectfully submits that independent claims 1 and 63 are patentable over the applied art.

Claims 5, 8, 9 and 13 are rejected under 35 U.S.C § 103(a) as being unpatentable over Crandall, Feng, and the article entitled “Adaptive, Quadratic, Preprocessing of Document Images for Binarization” by Mo et al. Claim 10 is rejected under 35 U.S.C § 103(a) as being unpatentable over Crandall, Feng, Mo and Laumeyer et al., U.S. Patent No. 6,449,384. Claim 14 is rejected under 35 U.S.C §

103(a) as being unpatentable over Crandall, Feng, Mo and Chun, U.S. Patent No. 5,949,916.

Dependent claims 5, 8-10, 13 and 14 are distinguished from the cited references for at least the reasons given above by virtue of their dependence on independent claim 1. Accordingly, Applicants respectfully request the Examiner reconsider and withdraw the rejections of claims 1, 2, 5, 8-10, 13, 14 and 63 under 35 U.S.C. § 103(a).

#### **IV. Allowable Subject Matter**

Claims 3, 4, 6, 7, 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

Applicants appreciate the indication that claims 3, 4, 6, 7, 11 and 12 would be allowed if rewritten in independent form, but respectfully submit that a broader scope of the invention is patentable in view of the art of record. Applicants request that the rewriting of claims 3, 4, 6, 7, 11 and 12 be held in abeyance until the Examiner has had the opportunity to reconsider the allowability of parent claim 1.

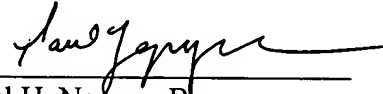
#### **V. New Claims**

Applicants have added dependent claims 77-97. The new claims find support in the specification as originally filed. No new matter has been added. Favorable reconsideration is respectfully requested.

**VI. Conclusion**

In view of the above, it is believed that the above-identified application is in condition for allowance, and notice to that effect is respectfully requested. Should the Examiner have any questions, the Examiner is encouraged to contact the undersigned at the telephone number indicated below.

Respectfully Submitted,



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